

Special Issue:

THE NON-SLEEPING UNIVERSE

Proceedings of two conferences on: 'Stars and the ISM' held from 24-26 November, 1997
and on: 'From Galaxies to the Horizon' held from 27-29 November, 1997
at the Centre for Astrophysics of the University of Porto, Portugal

Guest Editors:

M.T.V.T. LAGO and A. BLANCHARD

Preface	ix
List of Sponsors	xi
Committees	xii
List of Participants	xiii-xxxiii

NON-SLEEPING UNIVERSE: STARS AND THE ISM

INVITED PAPERS (I) CONTRIBUTED PAPERS (C) AND POSTERS (P)

I - Asteroseismology, Stellar Rotation and Activity

J. CHRISTENSEN-DALSGAARD / Asteroseismology (I)	1-12
I.W. ROXBURGH and M.J. THOMPSON / Space Asteroseismology on Later-Type Stars (P)	13-15
F.P. PIJPERS / Solar Rotation Inversions from Splittings and from A-Coefficients (P)	17-18
I.W. ROXBURGH for the COROT TEAM / COROT: Seismology of Stars (P)	19-20
I.W. ROXBURGH and S.V. VORONTSOV / On the Diagnostic Properties of Low Degree Acoustic Modes (P)	21-22
M.J. THOMPSON / What We have Learned from Helioseismology (I)	23-34
G. GIAMPIERI, A. POLNAREV, I.W. ROXBURGH and S.V. VORONTSOV / The Effect of Solar Oscillations on Space Gravitational Wave Experiments (P)	35-36
I.W. ROXBURGH / Helioseismic Constraints on the Solar Core (P)	37-38
I.W. ROXBURGH / Line Profiles of Solar P-Modes (P)	39-40
M.J. MONTEIRO, J. CHRISTENSEN-DALSGAARD and M.J. THOMPSON / Detection of the Lower Boundary of Stellar Convective Envelopes from Seismic Data (P)	41-42
I.W. ROXBURGH / Convective Overshooting and Mixing in Stellar Evolution (I)	43-50

K.I. MARCHENKOV, I.W. ROXBURGH and S.V. VORONTSOV / Non Linear Inversion for the Hydrostatic Structure of the Solar Interior (P)	51-52
H.P. SINGH, I.W. ROXBURGH and K.L. CHAN / A Parametric Study of 3-D Simulation of Penetrative Convection (P)	53-54
I.W. ROXBURGH / Steady Convection in Deep Compressible Layers (P)	55-56
I.W. ROXBURGH / Helioseismic Constraints on Solar Structure and the Solar Neutrino Problem (P)	57-58
D.R. SODERBLOM / Stellar Rotation and Activity (I)	59-68
L.J.R. MACHADO, M.T.V.T. LAGO and J.J.G. LIMA / Rotation of T Tauri Stars Revisited (P)	69-70
A.C. CAMERON / Stellar Tomography (I)	71-80
C.E. PARNELL / Our New View of the Solar Corona from Yohkoh and SOHO (I)	81-90
D.H. BROOKS, H.P. SUMMERS, R.A. HARRISON, J. LANG and A.C. LANZAFAME / EUV Spectral Variability and Non-Equilibrium Ionisation in the 'Quiet' Sun (C)	91-94
V.S. TAMAZIAN, J.A. DOCOBO and N.D. MELIKIAN / Flare Activity of Visual Binary COU 14 (C)	95-100
R. PALLAVICINI, A. MAGGIO, A. ORTOLANI, G. TAGLIAFERRI and S. COVINO / X-Ray Spectroscopy of Active Stars with ASCA and BeppoSAX (C)	101-104
G. MICELA, S. SCIORTINO, F.R. HARNDEN Jr. and R. ROSNER / X-Ray Variability and Rotation in the Pleiades Cluster (P)	105-106

II - Time Variability in Young Stars, Stellar Disks and Winds

M.T.V.T. LAGO, J.F. GAMEIRO, V.M. COSTA, L. MACHADO and A. PEDROSA / The Signatures of Structured Winds in T Tauri Stars (I)	107-116
L.P. CARRASQUEIRO, J.F. GAMEIRO and M.T.V.T. LAGO / A T Tauri Star Database (P)	117-118
V.M. COSTA and M.T.V.T. LAGO / Tauri Stars: The X-Ray Connection (P)	119-120
S. SCIORTINO, F. DAMIANI, G. MICELA and F. FAVATA / A Deep X-Ray Survey of the PMS Population of the Upper Sco-Cen Association (P)	121-122
A.I.G. de CASTRO, M. FRANQUEIRA, N. HUÉLAMO and E. VERDUGO / The Ultraviolet Variability of the T Tauri Stars (C)	123-126
N. HUÉLAMO, A.I.G. de CASTRO and M. FRANQUEIRA / X-Rays and UV Emission Lines in T Tauri Stars (P)	127-128
J.F. GAMEIRO and M.T.V.T. LAGO / Spectral Variability of T Tauri Stars in the Optical (C)	129-132
K.W. SMITH, G.F. LEWIS, I.A. BONNELL, P.S. BUNCLARK and J.P. EMERSON / Rapid Spectral Variability of DR Tau (P)	133-135
S.A. LAMZIN / The Structure of the Shock Wave in the Case of an Accretion onto Low Mass Young Stars (C)	137-140

P.J.V. GARCIA and E. THIÉBAUT / Extended (15×6 AU) $H\alpha$ Emission around T Tau N (P)	141-142
J.M. OLIVEIRA, Y.C. UNRUH and B.H. FOING / Balmer Line Profiles Variations in SU Aurigae from the MUSICOS 96 Multisite Campaign (P)	143-144
S.A. LAMZIN, M. TEODORANI, L. ERRICO, A.A. VITTONI, F. GIOVANNELLI and C. ROSSI / Is it Possible to Observe Radiation of FUORs Boundary Layer? (P)	145-146
D.F.M. FOLHA and J.P. EMERSON / Near Infrared Lines as Diagnostics of Accretion in T Tauri Stars (C)	147-150
C. SAUTY, K. TSINGANOS and E. TRUSSONI / MHD Models for Stellar Winds (I)	151-160
S.A. LAMZIN, M. TEODORANI, L. ERRICO, A.A. VITTONI, E.A. KOLOTILOV, A.S. MIROSHNICHENKO and R.V. YUDIN / On the Source of Optical Variability and Outflow in Z CMa System (P)	161-162
A. PEDROSA and M.T.V.T. LAGO / Models in T Tauri Stars Tested through $H\alpha$ (C)	163-166
S.A. LAMZIN, V. SHEVCHENKO, K. GRANKIN and S. MELNIKOV / On the Eclipses in GW Ori Double System (P)	167-168

III – Jets and Outflows in the ISM

M.D. SMITH / The Evolution of Young Stars, Protostellar Jets & Bipolar Outflows – a Unification Scheme (I)	169-178
A.J.L. FERNANDES and P.W.J.L. BRAND / Excitation of H_2 in Stellar Outflows: Shocks Versus Fluorescence (C)	179-182
M.D. SMITH / Molecular Outflows from High-Mass Protostars (P)	183-184
A.P. TSIVILEV, S. CORTIGLIONI, M.R. CIONI, M. ORSINI, E. PALAZZI and G.G.C. PALUMBO / A Microwave Jet Inside the Rosette Nebula? (P)	185-186
E. TOMMASI, D. LORENZETTI, T. GIANNINI, B. NISINI and F. PALLA / ISO-LWS Observations of NGC7129 Star Forming Region (C)	187-190
M.D. SMITH and M.M. MAC LOW / Supersonic Ambipolar Diffusion; Estimating the Magnetic Field Strength in Protostellar Outflows (P)	191-192
E.E. BLOEMHOF / Proper Motions of the H_2O Masers in W49N: The Velocity Variance/Covariance Matrix (P)	193-194
M.M. MAC LOW, M.D. SMITH, R.S. KLESSEN and A. BURKERT / The Decay of Supersonic and Super-Alfvénic Turbulence in Star-Forming Clouds (P)	195-196
I. SALAMANCA / The ‘Seyfert-Like’ Supernova SN 1997ab (C)	197-200
M.A. de AVILLEZ / Chimneys and Worms in the Galaxy (C)	201-204
J.A. DOCOBO, C. PRIETO and J.F. LING / The Influence of Mass Loss in the Eccentricity of Double Star Orbits (P)	205-207

T.C. TEIXEIRA, J.P. EMERSON and M.E. PALUMBO / CO Cocktails: Stirred ... but Not Shaken (P)	209–210
A. MAGALHÃES and J. CARNEIRO / The University of Porto Radio Spectrograph (P)	211–212
I.W. ROXBURGH / After Dinner Poster Paper (I)	213–214

NON-SLEEPING UNIVERSE: FROM GALAXIES TO THE HORIZON

INVITED PAPERS (I), CONTRIBUTED PAPERS (C) AND POSTERS (P)

I – *Gamma-Ray Bursts, the Hubble Deep Field and AGN's*

C. MEEGAN / Gamma-Ray Bursts: Where are We Now? (I)	215–224
O. BERTOLAMI / Axion-Dilaton Coupling and Gamma-Ray Bursts (C)	225–228
H. ZIAEPOUR / Initial Data Set for Cosmology (P)	229–230
F. PASCUAL-SÁNCHEZ / On the Hypotheses of a New Model of Galaxy Formation (P)	231–232
R.D. BLANDFORD / Recent Results of the Hubble Deep Field (I)	233–240
J. DENNETT-THORPE / Relativistic Motion on Kilo-Parsec Scales in Powerful Radio Sources (C)	241–244
R.D. BLANDFORD / Recent Results on Active Galactic Nuclei (I)	245–252
A. ORR and A.N. PARMAR / Soft X-Ray Absorption in AGN Seen by BeppoSAX/LECS (C)	253–256
P. AUGUSTO / The Active CD Galaxy of Abell 2390 (P)	257–258
M.E. FILHO and M.J. MARCHÃ / The 200 mJy Sample at 1.4 GHz (P)	259–260
P. AUGUSTO, P.N. WILKINSON and I.W.A. BROWNE / The Population of KPC-Scale Flat-Spectrum Radio Sources (C)	261–264

II – *CMB Anisotropies: Present Status and Future Developments*

A. BLANCHARD, J.G. BARTLETT, M. DOUSPIS and M. LEDOUR / What do the CB Fluctuations Tell Us? (I)	265–274
A.J.C. da SILVA and P. CRAWFORD / CMB Angular Power Spectrum and the Cosmological Parameters (P)	275–276
D. BARBOSA, J.G. BARTLETT and A. BLANCHARD / Constraining Ω_0 with Sunyaev-Zel'dovich Observations (C)	277–280

III – *Cosmological Models, Structure Formation and Dark Matter*

A.R. LIDDLE / Inflation and the Cosmic Microwave Background (I)	281–290
P.T.P. VIANA and A.R. LIDDLE / Structure Formation with Scalar Fields (C)	291–294
P.V. MONIZ / Origin of Structure in SQU (C)	295–297

P. AGUIAR and P. CRAWFORD / Axially Symmetric Cosmological Models with Perfect Fluid and Cosmological Constant (P)	299-300
R. DORAN and P. CRAWFORD / Could the Observable Universe be Inside of a Black Hole? (P)	301-302
R.R. CALDWELL, R. DAVE and P.J. STEINHARDT / Quintessential Cosmology (I)	303-310
C.J.A.P. MARTINS / Wiggly Cosmic Strings (C)	311-314
P.P. AVELINO, E.P.S. SHELLARD, J.H.P. WU and B. ALLEN / Structure Formation Seeded by Cosmic Strings (P)	315-316
C.J.A.P. MARTINS and E.P.S. SHELLARD / Superconducting Strings and Magnetic Fields (P)	317-318
P.P. AVELINO, R.R. CALDWELL and C.J.A.P. MARTINS / The Promise of Structure Formation with Cosmic Strings in an Open Universe (P)	319-320
C.J.A.P. MARTINS and E.P.S. SHELLARD / Evolution of Superconducting Strings (P)	321-322
J.P.M. de CARVALHO and P.P. AVELINO / Cosmic Strings with Self-Interacting HDM (P)	323-324
C.J.A.P. MARTINS and E.P.S. SHELLARD / Vortons: Dark Matter from Cosmic Strings (P)	325-326
J.P. MIMOSO and A. NUNES / General Relativity as an Attractor to Scalar-Tensor Gravity Theories (C)	327-330
R. SADAT / High-Redshift X-Ray Clusters and Ω_0 (C)	331-334
M.J. CARR, P.P. AVELINO and J.P.M. de CARVALHO / Non-Linear Gravitational Clustering Using the Zel'dovich Approximation (P)	335-336
F.P. PIJPERS / Measuring Time Delays for Gravitationally Lensed Variable Quasars (C)	337-340
L.J. GOICOECHEA, E. MEDIAVILLA, A. OSCOZ, M. SERRA and J. BUITRAGO / Gravitational Lenses and the Hubble Constant: Present and Future (C)	341-344
R.D. BLANDFORD / Summary (I)	345-352
List of Forthcoming Papers	353
The Kluwer LaTeX Style File	355-356